

EddyCus® TF lab 4040SR – Sheet Resistance Tester

P_T_4040SR_23



Highlights

- ▶ Contact-free and realtime
- ▶ Accurate single-point measurement
- ▶ Characterization of multilayer materials upon request
- ▶ Manual mapping of sheet resistance guided by easy-to-handle software

Applications

- ▶ Architectural glass (LowE)
- ▶ Touch screens and flat monitors
- ▶ OLED and LED applications
- ▶ Smart-glass applications
- ▶ Transparent antistatic foils
- ▶ Photovoltaics
- ▶ Semiconductors
- ▶ De-icing and heating applications
- ▶ Batteries and fuel cells
- ▶ Packaging materials

Device Series

- ▶ Metal thickness (nm, μm)
- ▶ Sheet resistance (Ohm/sq)
- ▶ Emissivity
- ▶ Conductivity / resistivity (mOhm cm)
- ▶ Electrical anisotropy (%)
- ▶ Weight (g/m^2) and drying status (%)
- ▶ Permeability (H/m) Beta
- ▶ Optical transmittance, reflectance, haze (%)

Materials

- ▶ Metal films and meshes
- ▶ Conductive oxides
- ▶ Nanowire films
- ▶ Graphene, CNT, Graphite
- ▶ Printed films
- ▶ Conductive polymers (PEDOT:PSS)
- ▶ Other conductive films and materials

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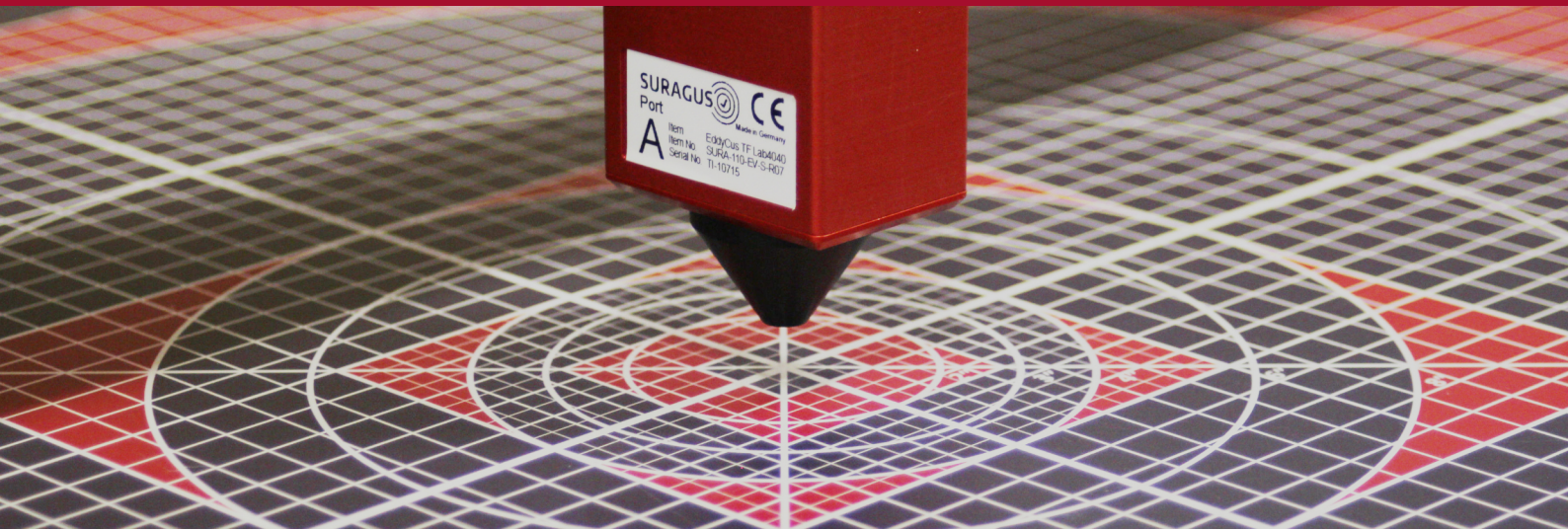
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Engineered and Made in Germany 





Measurement technology	Non-contact eddy current sensor
Substrates	Foils, glass, wafer, etc.
Substrate area	29.5" x 25.6" / 750 mm x 650 mm (for 400 mm x 400 mm samples)
Max. sample thickness/ sensor gap	3 / 5 / 10 / 25 mm (defined by the thickest sample)
Thickness measurement range of metal films (e.g. copper)	2 nm – 2 mm (in accordance with sheet resistance)
Device dimensions (w/h/d) / weight	30" x 12" x 26" / 760 mm x 310 mm x 660 mm / 20 kg
Further available features	Sheet resistance measurement, Metal thickness tester, Anisotropy sensor , Optical transmittance, reflectance, haze

	VLSR	LSR	MSR	HSR	VHSR
	6 decades are measurable by one sensor, but with slightly affected accuracy				
Range [Ohm/sq]	0.0001 – 0.1	0.01 – 10	0.1 – 100	10 – 2,000	1,000 – 200,000
Accuracy / Bias		± 1%		± 1 – 3%	± 3 – 5%
Repeatability (2σ)		< 0.3%		< 0.5%	< 0.3%

VLSR – Very Low Sheet Resistance , LSR – Low Sheet Resistance , MSR – Medium Sheet Resistance , HSR – High Sheet Resistance , VHSR – Very High Sheet Resistance

Device Control and Software

Sheet Resistance
260.87 mOhm/Sq

Mapping

	1	2	3
1	0.2608	0.2611	0.2608
2	0.2610	0.2610	0.2610
3	0.2610	0.2608	0.2610

Data Tracker

Id	Time	Series N.	Value	Unit
✓ 1	11:55:35	foil series	2.61e-01	Ohm/Sq
✓ 2	11:55:44	foil series	2.61e-01	Ohm/Sq
✓ 3	11:55:52	foil series	2.61e-01	Ohm/Sq
✓ 4	11:56:01	foil series	2.61e-01	Ohm/Sq
✓ 5	11:56:09	foil series	2.61e-01	Ohm/Sq
✓ 6	11:56:18	foil series	2.61e-01	Ohm/Sq
✓ 7	11:56:26	foil series	2.61e-01	Ohm/Sq
✓ 8	11:56:35	foil series	2.61e-01	Ohm/Sq
✓ 9	11:56:44	foil series	2.58e-01	Ohm/Sq
✓ 10	11:56:52	foil series	2.60e-01	Ohm/Sq
✓ 11	11:57:00	foil series	2.64e-01	Ohm/Sq
✓ 12	11:57:09	foil series	2.65e-01	Ohm/Sq
✓ 13	11:57:18	foil series	2.67e-01	Ohm/Sq
✓ 14	11:57:26	foil series	2.70e-01	Ohm/Sq
✓ 15	11:57:35	foil series	2.58e-01	Ohm/Sq
✓ 16	11:57:43	foil series	2.64e-01	Ohm/Sq
✓ 17	11:57:52	foil series	2.56e-01	Ohm/Sq